Abstracts

14-W GaN-based microwave power amplifiers

Y.-F. Wu, D. Wapolnek, J. Ibbetson, P. Parikh, B.P. Keller and U.K. Mishra. "14-W GaN-based microwave power amplifiers." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 963-965.

High-power GaN-based flip-chip ICs are demonstrated using AlGaN/GaN High-Electron-Mobility-Transistors (HEMTs) as the active devices and AlN as the circuit substrates. The circuits achieved 6-10 GHz bandwidth, 9 dB linear gain and 14.1-W output power. This power level is the highest for a GaN-based amplifier to date, and is a factor of 4-7 higher than conventional GaAs-HEMT-based amplifiers using the same size of output devices.

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